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PATENT ABSTRACTS OF JAPAN

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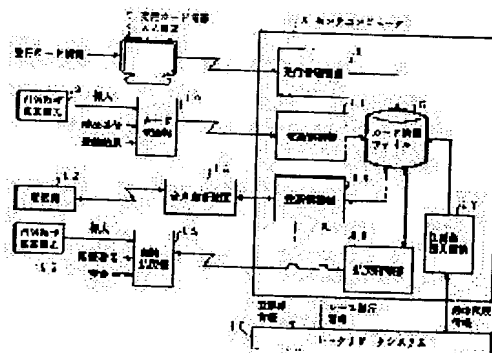
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(54) PUBLIC GAMBLING PREPAID CARD SYSTEM

(57)Abstract:

PURPOSE: To allow anyone to easily bet on public gambling such as a boat race from a common telephone set through the use of a prepaid card.

CONSTITUTION: A unique card number is printed and magnetically recorded to the individual prepaid card and the card number of an issued card and a usable account are stored in a card information file 6 on the side of a center. At the time of the starting of use, when a user inputs a password number from a card register 10, the password number inputted corresponding to the card number which is automatically read from the card by the register 10 is registered to a file 6 by a register control part 11. At the time of purchasing a betting ticket, when a user calls a center from a telephone set 12 to input the card number and the password number by pushbutton operation, a betting control part 14 collates them with the card number and the password number registered in the file 6 to identify the person, receives betting and reduces the usable account managed by the file 6 by the charge necessary for purchase.



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CLAIMS

[Claim(s)]

[Claim 1] The card information file which is installed in a center and has registered each card number and usable amount of money of a prepaid card which were published, The personal identification number register operation to the prepaid card by the prepaid card purchaser is answered. The card registration machine which sends out the inputted personal identification number and the card number currently recorded on the prepaid card to a center, The registration control means which registers the personal identification number into said card information file corresponding to the card number which was installed in the center and has been sent out from said card registration machine, It connects through the telephone and audio response unit which were connected to the public network while being installed in the center. After collating the personal identification number registered into said card information file corresponding to the card number inputted by the push button operation of the telephone of a connection place, and the personal identification number inputted by the push button operation of the telephone of said connection place and performing a principal's authentication, Reception processing of vote is performed within the limits of the available amount of money registered into said card information file corresponding to said inputted card number. The municipally operated race prepaid card system characterized by providing the vote control means which subtracts the purchase price concerning the received vote from the available amount of money registered into said card information file.

[Claim 2] Said vote control means is equipped with the configuration transmitted to a totalizator system while registering the detail of the received vote into said card information file corresponding to the card number of said prepaid card. And a refund transfer means to transfer hit gold to the detail of the vote which it was installed in the center and hit in said card information file based on the hit refund information from said totalizator system, The automatic payment ** machine which repays the cash of the refund frame which sent out the personal identification number inputted from the **** claimant, and the card number recorded on the inserted prepaid card to the center, and was notified from the center to a **** claimant, After being installed in a center, collating the personal identification number registered into said card information file corresponding to the card number sent out from said automatic payment ** machine, and the personal identification number sent out from said automatic payment ** machine and performing a principal's authentication, The municipally operated race prepaid card system according to claim 1 characterized by having the **** control means notified to said automatic payment ** machine by using the total amount of the hit gold registered into said card information file corresponding to said inputted card number as refund amount.

[Claim 3] It is the municipally operated race prepaid card system according to claim 2 which is recorded by magnetic recording while the card number is printed by each prepaid card, and is characterized by said card registration machine and said automatic payment ** machine reading the card number by which magnetic recording is carried out to the prepaid card.

[Claim 4] The municipally operated race prepaid card system according to claim 3 characterized by for a personal identification number, the card amount of money, the balance that can be purchased, the amount of vote ticket purchase, a vote refund frame, and the received detail of

each vote being recorded on a card number response of a prepaid card by said card information file, and a game holding location, a ball-race number, ****, vote number of sheets, and **** single gold being recorded on it as a detail of each vote at the time of an election day.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the municipally operated race prepaid card system which can carry out vote to municipally operated races, such as a motorboat race, to a detail from common telephone using a prepaid card more about a municipally operated race prepaid card system.

[0002]

[Description of the Prior Art] The vote ticket of municipally operated races, such as a motorboat race and a horse race, goes to a municipally operated race field or an outside-the-hall sale field, the vote ticket which he wants to purchase at the window is declared, and in order that the approach of receiving cash and the vote ticket outputted from an issue-of-banknotes machine by exchange might be common and might receive geographical constraint, the purchase opportunity of a vote ticket was to be limited remarkably conventionally.

[0003] Moreover, although the vote ticket purchase system which makes a payment system bank account draw down of the membership system represented by telephone vote and home terminal vote also exists By this joining the member organization on condition of bank draw down first, and establishing the fixed deposit account made into the bank in establishment of the right of pledge with a municipally operated race enforcement person The vote which makes a bank account the payment system of purchase payment ** is attained, and since the funds and time and effort for establishing a fixed deposit account were required or became the member, there was a trouble that the clerical work procedure period of a certain extent was needed.

[0004] Then, in order to enable it to purchase a vote ticket more easily, the following vote ticket purchase systems which used the prepaid card are proposed.

[0005] One of them so that JP,2-262755,A may see The prepaid card which recorded the amount of money whose card number and rewriting which were made into rewriting impossible were enabled, The special terminal for a communication link which has functions, such as rewriting of the read metallurgy frame of the card number recorded on the prepaid card, is used. While reducing the amount of money which connects this terminal for a communication link with a center through the general telephone line, purchases a vote ticket by the communication link between both, and balances the amount of purchase in the terminal side for a communication link from the amount of money in a prepaid card When the vote detail is saved in the center side corresponding to the card number and ***** payment ***** is behind about a prepaid card, It is the system (the 1st conventional system is called hereafter) which repaid hit gold according to the vote detail saved in the center corresponding to the card number of the prepaid card.

[0006] Another so that JP,4-370879,A may see The special card terminal unit which has functions, such as rewriting of the amount of money recorded on the prepaid card which recorded the amount of money whose rewriting was enabled, and the prepaid card, and record of the specific number to the prepaid card, is used. This card terminal unit is connected with a center through the general telephone line, and the content of vote and a personal identification number are told to a center. In a center side While adding and saving a specific number at the content of vote and personal identification number which were notified, the specific number is

returned to a card terminal unit side. In a card terminal unit side The amount of money recorded on the prepaid card while recording the returned specific number on the prepaid card is reduced by the amount of utilization. furthermore, when a personal identification number is inputted after setting the prepaid card in the card terminal unit, and reference of a vote result is required It is the system (the 2nd conventional system is called hereafter) which specifies the content of vote as a center side based on the personal identification number and the specific number of the prepaid card read with the card terminal unit, and returned the vote result.

[0007]

[Problem(s) to be Solved by the Invention] In the vote ticket purchase system which used the conventional prepaid card mentioned above, if a prepaid card is purchased, since the rest can purchase a vote ticket by communicating with a center using the general telephone line, while geographical constraint is solved, procedure also becomes easy, and a vote ticket can be easily purchased compared with the existing vote ticket purchase system. However, there are the following troubles.

[0008] He is trying to reduce the amount of money recorded on the prepaid card by the amount of purchase while reading the card number by which the terminal for a communication link was recorded on the prepaid card in the 1st conventional system at the time of vote ticket purchase. Since he is trying to reduce the amount of money recorded on the prepaid card by the amount of purchase while a card terminal unit records the specific number given in the center on a prepaid card in the 2nd conventional system, Special equipment called the terminal for a communication link and a card terminal unit is needed, respectively, and a vote ticket cannot be purchased only by the usual telephone, such as a push-button phone which has generally spread.

[0009] Moreover, since the 1st and 2nd conventional systems recorded the balance of a prepaid card on the prepaid card itself and have managed it, the danger that a prepaid card will be unjustly used by the alteration of the balance is high.

[0010] furthermore -- although a principal is checked by the 1st conventional system only with the card number recorded on the prepaid card at the time of vote ticket purchase and a personal identification number inputs in the 2nd conventional system -- this -- the principal at the time of next vote result enquiry -- in order only use for authentication and not to perform a principal's authentication on the occasion of vote ticket purchase, the danger are abused when a prepaid card includes a third party's hand more carelessly is high

[0011] Then, the object of this invention is to offer the municipally operated race prepaid card system which enabled the purchase of the vote ticket by the prepaid card using the usual telephones, such as a push-button phone.

[0012] Moreover, another object of this invention is to offer the municipally operated race prepaid card system which can prevent the alteration of the balance of a prepaid card effectively.

[0013] Furthermore, other objects of this invention are to offer the municipally operated race prepaid card system which can prevent effectively the improper use by the third party of a prepaid card.

[0014]

[Means for Solving the Problem] The card information file which the municipally operated race prepaid card system of this invention is installed in a center in order to attain the above-mentioned object, and has registered each card number and usable amount of money of a prepaid card which were published, The personal identification number register operation to the prepaid card by the prepaid card purchaser is answered. The card registration machine which sends out the inputted personal identification number and the card number currently recorded on the prepaid card to a center, The registration control means which registers the personal identification number into said card information file corresponding to the card number which was installed in the center and has been sent out from said card registration machine, It connects through the telephone and audio response unit which were connected to the public network while being installed in the center. After collating the personal identification number registered into said card information file corresponding to the card number inputted by the push button

operation of the telephone of a connection place, and the personal identification number inputted by the push button operation of the telephone of said connection place and performing a principal's authentication, It has the vote control means which subtracts the purchase price which performs reception processing of vote within the limits of the available amount of money registered into said card information file corresponding to said inputted card number, and starts the received vote from the available amount of money registered into said card information file.

[0015]

[Function] In the municipally operated race prepaid card system of this invention, while being printed by the card side so that a unique card number can check by the user, it is recorded on each prepaid card also by approaches, such as magnetic recording, and the available amount of money is not recorded on the card itself by approaches, such as magnetic recording, but package management is carried out in the center. That is, each card number and usable amount of money of a prepaid card which were published are registered into the card information file installed in the center in advance of the sale.

[0016] If the user who purchased the prepaid card needs to register a personal identification number before purchasing a vote ticket, the purchased prepaid card is inserted in a card registration machine and personal identification number register operation accompanied by the input of a personal identification number is performed. A card registration machine sends out the inputted personal identification number and the card number currently recorded on the prepaid card by approaches, such as magnetic recording, to a center. The registration control means installed in the center registers the personal identification number into a card information file corresponding to the card number sent out from the card registration machine.

[0017] The purchase of the vote ticket by the prepaid card concerned of the user who finished registration of a personal identification number is henceforth attained using this personal identification number. Namely, if a user calls a center from the usual telephones, such as a push-button phone. If the vote control means installed in the center is connected with telephone through an audio response unit and a user inputs the personal identification number which carried out [above-mentioned] registration with the card number of a self prepaid card by the push button operation of telephone. After a vote control means's collating the personal identification number registered into the card information file corresponding to the inputted card number, and the personal identification number inputted from telephone and performing a principal's authentication, The purchase price which performs reception processing of vote within the limits of the available amount of money registered into the card information file corresponding to said inputted card number, and starts the received vote is subtracted from the available amount of money registered into the card information file.

[0018]

[Example] Next, the example of this invention is explained to a detail with reference to a drawing.

[0019] Reference of drawing 1 prints the card number 3 from which the prepaid card 1 used with the municipally operated race prepaid card system of one example of this invention serves as a meaning by the face value 2 and the system in a card-face side. Moreover, the recording surface 4 which consisted of magnetic-recording media is formed, and the same card number as the card number 3 printed by this recording surface 4 is recorded magnetically. The printed card number 3 is for a user etc. to recognize the card number of an own prepaid card, and the card number currently recorded on the recording surface 4 is for enabling it to recognize mechanically. Therefore, as long as the latter card number is an approach in which read is possible mechanically, you may make it record it by other approaches, such as a bar code.

[0020] If drawing 2 is referred to, the municipally-operated-race prepaid card system of one example of this invention consists of a center computer 5, and the issuance card information input terminal 7 connected to this center computer 5, the card registration machine 10, an audio response unit 13 and the automatic payment ** machine 15, and has the configuration connected with the usual telephones 12, such as a push-button phone by which the center computer 5 was installed in ordinary homes etc. through the audio response unit 13 and the public network which is not illustrated. Moreover, the center computer 5 is connected with the

totalizator system 18 which is a system of sale of a vote ticket, and **** of being main possible [a communication link]. In addition, 9 and 16 are prepaid cards.

[0021] In the case of this example, the center computer 5 has the card information file 6, the issuance function manager 8, the registration control section 11, the vote control section 14, the refund transfer function 17, and the **** control section 19.

[0022] The card information file 6 is a file which manages card information, such as a card number of each published prepaid card, an available balance, a personal identification number, a vote detail, and a vote refund frame, collectively, and shows the example of a content to drawing 3.

[0023] As shown in drawing 3, corresponding to a card number 61, a personal identification number 62, the card amount of money (face value) 63, the balance 64 that can be purchased, the amount 65 of vote ticket purchase, the vote refund frame 66, and the vote detail 67 are registered into the card information file 6. Moreover, 671, the holding location 672 of a municipally operated race, the ball-race number 673, **** 674, the vote number of sheets 675, and **** single gold 676 are registered into each vote detail 67 at the time of an election day.

[0024] Hereafter, actuation of the municipally operated race prepaid card system of this example constituted as mentioned above is explained.

[0025] First, before selling the published prepaid card, a system administrator etc. inputs each card number and face value of a prepaid card which were published by the lot unit from the issuance card information input terminal 7. The card number of this prepaid card of each which was inputted and its face value are transmitted to the center computer 5 from the issuance card information input terminal 7, and are registered into the card information file 6 by the internal issuance function manager 8. That is, while registering each card number as a card number 61 of drawing 3, the face value is registered into the card amount of money 63 and the balance 64 which can be purchased. At this time, 0 is recorded for the value which shows un-registering to a personal identification number 62 on the amount 65 of vote ticket purchase, and the vote refund frame 66, and it changes each vote detail 67 for example, into a null condition. Such registration is ended and a sale is presented with those prepaid cards the back.

[0026] Next, as shown in drawing 2, the user who purchased the sold prepaid card inserts the prepaid card 9 in the card registration machine 10, and registers the personal identification number for using the prepaid card 9.

[0027] As the card registration machine 10 is shown in drawing 4, a card slot 101, The card number read station 102 which reads the card number recorded on the recording surface 4 of the prepaid card 9 inserted in this card slot 101, The control units 103, such as a ten key, and the displays 104, such as a CRT display, If it consists of control sections 105 which are connected with the center computer 5 through a communication line, and manage control of the card registration machine 10 whole and the prepaid card 9 which the user purchased is inserted in a card slot 101 The card number recorded on the recording surface 4 of a prepaid card 9 is read by the card number read station 102. A control section 105 displays the prompting message which inputs a personal identification number into a display 104, and if a user operates a control unit 103 and inputs a personal identification number, it will transmit this inputted personal identification number and the card number read by the card number read station 102 to the center computer 5.

[0028] By center computer 5, the information sent from the card registration machine 10 is received by the registration control section 11, and the registration control section 11 starts the processing shown in drawing 5. First, the received card number is searched from the card information file 6 (S1). And since it is NO) and an inaccurate prepaid card in (S2 when the received card number does not exist in the card information file 6, an error message is returned (S3), and the card registration machine 10 refuses registration of a personal identification number.

[0029] Moreover, when the card number is registered into the card information file 6 (it is YES at S2), it investigates whether corresponding to it, the personal identification number is already registered into the card information file 6, and (S4) and when already being registered, NO) and an error message are returned by (S4 (S3), and, as for the card registration machine 10,

registration of a personal identification number is refused. In the case of this example, this is because registration of a personal identification number is merely permitted only at once, and it is prevented that a prepaid card [finishing / personal identification number registration] changes a personal identification number, and is unjustly used by the third party by this.

[0030] On the other hand, when a card number exists and a personal identification number has not been registered (it is YES at S4), corresponding to the card number in which the card information file 6 carried out [above-mentioned] a retrieval success, the personal identification number which received from the card registration machine 10 is registered (S5). That is, the personal identification number which received in the part of the personal identification number 62 corresponding to the card number 61 which corresponded is registered. And a registration result (registered personal identification number) is returned to the card registration machine 10 (S6), and the card registration machine 10 displays this on a display 104, and notifies a user of it.

[0031] Thereby, the user who purchased the prepaid card becomes possible [purchasing a vote ticket based on this prepaid card].

[0032] In addition, it is because there is a danger that the opportunity of the part for a personal identification number to touch a third party's eyes will increase, and it will invite an unjust act if the configuration of which determines a personal identification number by the system side, and a user is simultaneously notified at the time of a sale of a prepaid card is taken to have made it make the purchaser itself register registration of a personal identification number in this invention using the card registration machine 10. Moreover, the user itself is not made to input a card number, but the card registration machine 10 read it automatically for avoiding the danger that registration of a personal identification number will be unjustly performed to the prepaid card which has not been purchased, when the user was made to input to a card number.

[0033] Thus, if the card registration machine 10 is installed in the convenience store etc. when selling a prepaid card at a convenience store etc. since actuation of registering a personal identification number to the purchased prepaid card is needed for example, anyone can obtain easily the prepaid card which can be voted and is convenient.

[0034] Now, after registering a personal identification number, the purchase of a vote ticket is attained with the common telephone 12 which can send a push signal. A vote ticket here means the vote ticket on the magnetic-recording medium of the computer used by usual not a vote ticket but telephone vote system etc. of a paper medium. Hereafter, the configuration and its actuation at the time of vote ticket purchase are explained.

[0035] If a user dials telephone 12, a vote reception center is telephoned and the telephone line is connected, telephone 12 and the communication link of the vote control section 14 of the center computer 5 will be attained through an audio response unit 13.

[0036] First, as shown in drawing 6, the vote control section 14 is promoted to a user with voice with an audio response unit 13 so that a card number and a personal identification number may be inputted (S11). If the card number which a user operates push ** of telephone 12 according to this, and is printed on the self prepaid card, and a personal identification number [finishing / registration] are inputted An audio response unit 13 changes into predetermined computer data the card number and personal identification number by the push signal sent out from telephone 12, transmit to the vote control section 14, and the vote control section 14 receives this. It investigates whether the group of the card number, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 (S12).

[0037] the case (it is YES at S13) where the group of the received card number, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 — the registration control section 11 — a cardholder — it attests with his being a principal and future vote ticket purchase actuation is enabled. However, even if the received card number is not registered or it is registered, when a personal identification number does not agree (it is NO at S13), a user is notified of the purport which refuses the purchase of a vote ticket with voice with an audio response unit 13 as that to which the purchase of an inaccurate vote ticket is performed (S14), the telephone line is disconnected,

and processing is ended.

[0038] When it attests with his being a just user, the registration control section 11 notifies a user of the balance 64 of drawing 3 registered into the card information file 6 corresponding to the group of the card number and personal identification number which carried out [above-mentioned] agreement which can be purchased with voice through an audio response unit 13 (S15), and performs input process of the vote ticket information on within the limits of the notified balance which can be purchased (S16).

[0039] Namely, if a user inputs vote ticket information, such as a holding location, a ball-race number, **** (victory types, such as quinella, are included), and the purchase number of votes, for example, by the push button operation from telephone 12 They are changed into predetermined computer data by the audio response unit 13, and are transmitted to the vote control section 14 by it. The vote control section 14 investigates whether these purchase prices fall within the range of the user's balance which can be purchased, and when not settled, it processes that an audio response unit 13 notifies that with voice etc.

[0040] on the other hand, when the vote ticket information that it falls within the range of the balance which can be purchased is inputted The propriety of purchase is judged based on the ball-race progress information sent from the totalizator system 18 (S17). When it can purchase, deliver YES) and vote ticket information to a totalizator system 18, and it is made to total by (S18 (S19). Moreover, while recording this vote ticket information on the vote detail 67 corresponding to the card number 61 concerned in the card information file 6, the purchase amount of money is added to the amount 65 of vote ticket purchase, and the purchase amount of money is reduced from the balance 64 which can be purchased (S20). And a user is notified of a vote result with voice through an audio response unit 13 (S21).

[0041] Then, the vote control section 14 repeats the processing returned and mentioned above to YES) and processing S15 by (S22, when it asks a user with voice whether continue vote or not through an audio response unit 13, for example, continuation of vote is directed by actuation of push **, and if the directions which finish vote are inputted, the telephone line will be cut and it will end processing.

[0042] Next, the reception of a transfer of a refund and the user of a refund is explained.

[0043] A totalizator system 18 transmits the hit refund information containing a holding location, a ball-race number, **** that guessed right, and **** single gold to the center computer 5 after ** ball-race termination.

[0044] This hit refund information is received by the refund transfer function 17 of the center computer 5. The refund transfer function 17 About the vote detail containing the holding location and ball-race number which the hit refund information concerned shows among the vote details 67 registered into the card information file 6 The amount of money which registered the **** single gold which hit refund information shows to the **** single gold 676 when having guessed right, and multiplied the vote number of sheets 675 by **** single gold 676 is added to the vote refund frame 66. In addition, although it is unnecessary, you may make it especially processing register into **** single gold 676 the value of the purport which has not guessed right, for example, when having not guessed right.

[0045] Now, when getting to know that vote of the self [user / who cast his vote] in a newspaper, radio, etc. guessed right and receiving a refund, it goes to the location in which the prepaid card used for vote was brought and the automatic payment ** machine 15 was installed, and as shown in drawing 2 , the prepaid card 16 is inserted in the automatic payment ** machine 15, and a refund is received.

[0046] As the automatic payment ** machine 15 is shown in drawing 7 , a card slot 151, The card number read station 152 which reads the card number recorded on the recording surface 4 of the prepaid card 16 inserted in this card slot 151, The control units 153, such as a ten key, and the displays 154, such as a CRT display, The cash-disbursement opening 155 and the money processing section 156 which discharges cash from this cash-disbursement opening 155, If it consists of control sections 157 which are connected with the center computer 5 through a communication line, and manage control of the automatic payment ** machine 15 whole and a user inserts the self prepaid card 16 in a card slot 151 The card number recorded on the

recording surface 4 of a prepaid card 16 is read by the card number read station 152.

[0047] A control section 157 displays the prompting message which inputs a personal identification number into a display 154, and if a user operates a control unit 153 and inputs a personal identification number, it will transmit this inputted personal identification number and the card number read by the card number read station 152 to the center computer 5.

[0048] By center computer 5, the information sent from the automatic payment ** machine 15 is received by the **** control section 19, and the **** control section 19 starts the processing shown in drawing 8. First, it investigates whether the group of the card number sent from the automatic payment ** machine 15, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 (S31). And since it is NO) and an inaccurate prepaid card in (S32 when the agreeing group does not exist in the card information file 6, an error message is returned (S33), and the automatic payment ** machine 15 refuses a repayment.

[0049] Moreover, when the group of the agreeing card number and personal identification number is registered into the card information file 6 (it is YES at S32), It investigates whether the vote refund frame 66 registered corresponding to it is 0 (S34), when a vote refund frame is 0, NO) and an error message are returned by (S34 (S33), and the automatic payment ** machine 15 displays on a display 154 that there is no refund, and refuses a repayment.

[0050] On the other hand, the group of the agreeing card number and personal identification number exists, and when the vote refund frame 66 is not 0 (it is YES at S34), the **** control section 19 notifies the vote refund frame 66 to the automatic payment ** machine 15 (S35).

[0051] Pointing to the control section 157 of the automatic payment ** machine 15 so that the cash which is equivalent to the vote refund frame to the money processing section 156 may be paid, if advice of a vote refund frame is received from the **** control section 19, the money processing section 156 pays the cash of the directed frame to a user with the cash-disbursement opening 155. In addition, after that, the automatic payment ** machine 15 notifies the purport which the payment of cash completed to the **** control section 19 of the center computer 5, and the **** control section 19 initializes the vote refund frame 66 of the card information file 6 to 0.

[0052]

[Effect of the Invention] According to the municipally operated race prepaid card system of this invention explained above, the following effectiveness can be acquired.

[0053] Since the configuration which inputs the card number and personal identification number of the prepaid card which is needed in order to check that he is the normal purchaser of a prepaid card at the time of the purchase of a vote ticket by the push button operation, and does not manage the balance of a prepaid card with the card itself was adopted, the purchase of a vote ticket is attained by the usual telephone, and the vote ticket by the telephone can be purchased anywhere easily.

[0054] Since the balance of a prepaid card is managed by the card information file of a center, it becomes that there is no possibility that the balance of a prepaid card will be intentionally altered by the user.

[0055] Even if it cannot purchase a vote ticket, but the prepaid card with which the card number was printed even if crosses the personal identification number to a third party's hand more carelessly since only the principal is indicated by the not-knowing card itself if not in agreement with the registered personal identification number, it is not used unjustly. Moreover, since the check of a principal was taken in the personal identification number also at the time of **** of hit gold, a third party's injustice in **** can also be prevented effectively.

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TECHNICAL FIELD

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PRIOR ART

[Description of the Prior Art] The vote ticket of municipally operated races, such as a motorboat race and a horse race, goes to a municipally operated race field or an outside-the-hall sale field, the vote ticket which he wants to purchase at the window is declared, and in order that the approach of receiving cash and the vote ticket outputted from an issue-of-banknotes machine by exchange might be common and might receive geographical constraint, the purchase opportunity of a vote ticket was to be limited remarkably conventionally.

[0003] Moreover, although the vote ticket purchase system which makes a payment system bank account draw down of the membership system represented by telephone vote and home terminal vote also exists, the vote which makes a bank account the payment system of purchase payment ** becomes possible by this joining the member organization on condition of bank draw down first, and establishing the fixed deposit account made into the bank in establishment of the right of pledge with a municipally operated race enforcement person. Since the funds and time and effort for establishing a fixed deposit account were required or became the member, there was a trouble that the clerical work procedure period of a certain extent was needed.

[0004] Then, in order to enable it to purchase a vote ticket more easily, the following vote ticket purchase systems which used the prepaid card are proposed.

[0005] One of them is looked at by JP,2-262755,A, The prepaid card which recorded the amount of money whose card number and rewriting which were made into rewriting impossible were enabled, The special terminal for a communication link which has functions, such as rewriting of the read metallurgy frame of the card number recorded on the prepaid card, is used. While reducing the amount of money which connects this terminal for a communication link with a center through the general telephone line, purchases a vote ticket by the communication link between both, and balances the amount of purchase in the terminal side for a communication link from the amount of money in a prepaid card When the vote detail is saved in the center side corresponding to the card number and ***** payment ***** is behind about a prepaid card, It is the system (the 1st conventional system is called hereafter) which repaid hit gold according to the vote detail saved in the center corresponding to the card number of the prepaid card.

[0006] Another is the prepaid card which recorded the amount of money whose rewriting was enabled so that JP,4-370879,A might see, The special card terminal unit which has functions, such as rewriting of the amount of money recorded on the prepaid card and record of the specific number to the prepaid card, is used. This card terminal unit is connected with a center through the general telephone line, and the content of vote and a personal identification number are told to a center. In a center side While adding and saving a specific number at the content of vote and personal identification number which were notified, the specific number is returned to a card terminal unit side. In a card terminal unit side The amount of money recorded on the prepaid card while recording the returned specific number on the prepaid card is reduced by the amount of utilization. furthermore, when a personal identification number is inputted after setting the prepaid card in the card terminal unit, and reference of a vote result is required It is the system (the 2nd conventional system is called hereafter) which specifies the content of vote as a center side based on the personal identification number and the specific number of the prepaid card read with the card terminal unit, and returned the vote result.

[Translation done.]

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EFFECT OF THE INVENTION

[Effect of the Invention] According to the municipally operated race prepaid card system of this invention explained above, the following effectiveness can be acquired.

[0053] Since the configuration which inputs the card number and personal identification number of the prepaid card which is needed in order to check that he is the normal purchaser of a prepaid card at the time of the purchase of a vote ticket by the push button operation, and does not manage the balance of a prepaid card with the card itself was adopted, the purchase of a vote ticket is attained by the usual telephone, and the vote ticket by the telephone can be purchased anywhere easily.

[0054] Since the balance of a prepaid card is managed by the card information file of a center, it becomes that there is no possibility that the balance of a prepaid card will be intentionally altered by the user.

[0055] Even if it cannot purchase a vote ticket, but the prepaid card with which the card number was printed even if crosses the personal identification number to a third party's hand more carelessly since only the principal is indicated by the not-knowing card itself if not in agreement with the registered personal identification number, it is not used unjustly. Moreover, since the check of a principal was taken in the personal identification number also at the time of **** of hit gold, a third party's injustice in **** can also be prevented effectively.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] In the vote ticket purchase system which used the conventional prepaid card mentioned above, if a prepaid card is purchased, since the rest can purchase a vote ticket by communicating with a center using the general telephone line, while geographical constraint is solved, procedure also becomes easy, and a vote ticket can be easily purchased compared with the existing vote ticket purchase system. However, there are the following troubles.

[0008] He is trying to reduce the amount of money recorded on the prepaid card by the amount of purchase while reading the card number by which the terminal for a communication link was recorded on the prepaid card in the 1st conventional system at the time of vote ticket purchase. Since he is trying to reduce the amount of money recorded on the prepaid card by the amount of purchase while a card terminal unit records the specific number given in the center on a prepaid card in the 2nd conventional system, Special equipment called the terminal for a communication link and a card terminal unit is needed, respectively, and a vote ticket cannot be purchased only by the usual telephone, such as a push-button phone which has generally spread.

[0009] Moreover, since the 1st and 2nd conventional systems recorded the balance of a prepaid card on the prepaid card itself and have managed it, the danger that a prepaid card will be unjustly used by the alteration of the balance is high.

[0010] furthermore — although a principal is checked by the 1st conventional system only with the card number recorded on the prepaid card at the time of vote ticket purchase and a personal identification number inputs in the 2nd conventional system — this — the principal at the time of next vote result enquiry — in order only use for authentication and not to perform a principal's authentication on the occasion of vote ticket purchase, the danger are abused when a prepaid card includes a third party's hand more carelessly is high

[0011] Then, the object of this invention is to offer the municipally operated race prepaid card system which enabled the purchase of the vote ticket by the prepaid card using the usual telephones, such as a push-button phone.

[0012] Moreover, another object of this invention is to offer the municipally operated race prepaid card system which can prevent the alteration of the balance of a prepaid card effectively.

[0013] Furthermore, other objects of this invention are to offer the municipally operated race prepaid card system which can prevent effectively the improper use by the third party of a prepaid card.

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MEANS

[Means for Solving the Problem] The card information file which the municipally operated race prepaid card system of this invention is installed in a center in order to attain the above-mentioned object, and has registered each card number and usable amount of money of a prepaid card which were published, The personal identification number register operation to the prepaid card by the prepaid card purchaser is answered. The card registration machine which sends out the inputted personal identification number and the card number currently recorded on the prepaid card to a center, The registration control means which registers the personal identification number into said card information file corresponding to the card number which was installed in the center and has been sent out from said card registration machine, It connects through the telephone and audio response unit which were connected to the public network while being installed in the center. After collating the personal identification number registered into said card information file corresponding to the card number inputted by the push button operation of the telephone of a connection place, and the personal identification number inputted by the push button operation of the telephone of said connection place and performing a principal's authentication, It has the vote control means which subtracts the purchase price which performs reception processing of vote within the limits of the available amount of money registered into said card information file corresponding to said inputted card number, and starts the received vote from the available amount of money registered into said card information file.

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OPERATION

[Function] In the municipally operated race prepaid card system of this invention, while being printed by the card side so that a unique card number can check by the user, it is recorded on each prepaid card also by approaches, such as magnetic recording, and the available amount of money is not recorded on the card itself by approaches, such as magnetic recording, but package management is carried out in the center. That is, each card number and usable amount of money of a prepaid card which were published are registered into the card information file installed in the center in advance of the sale.

[0016] If the user who purchased the prepaid card needs to register a personal identification number before purchasing a vote ticket, the purchased prepaid card is inserted in a card registration machine and personal identification number register operation accompanied by the input of a personal identification number is performed. A card registration machine sends out the inputted personal identification number and the card number currently recorded on the prepaid card by approaches, such as magnetic recording, to a center, and the registration control means installed in the center registers the personal identification number into a card information file corresponding to the card number sent out from the card registration machine.

[0017] The purchase of the vote ticket by the prepaid card concerned of the user who finished registration of a personal identification number is henceforth attained using this personal identification number. That is, when a user calls a center from the usual telephones, such as a push-button phone, it is, If the vote control means installed in the center is connected with telephone through an audio response unit and a user inputs the personal identification number which carried out [above-mentioned] registration with the card number of a self prepaid card by the push button operation of telephone After a vote control means's collating the personal identification number registered into the card information file corresponding to the inputted card number, and the personal identification number inputted from telephone and performing a principal's authentication, The purchase price which performs reception processing of vote within the limits of the available amount of money registered into the card information file corresponding to said inputted card number, and starts the received vote is subtracted from the available amount of money registered into the card information file.

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EXAMPLE

[Example] Next, the example of this invention is explained to a detail with reference to a drawing.

[0019] Reference of drawing 1 prints the card number 3 from which the prepaid card 1 used with the municipally operated race prepaid card system of one example of this invention serves as a meaning by the face value 2 and the system in a card-face side. Moreover, the recording surface 4 which consisted of magnetic-recording media is formed, and the same card number as the card number 3 printed by this recording surface 4 is recorded magnetically. The printed card number 3 is for a user etc. to recognize the card number of an own prepaid card, and the card number currently recorded on the recording surface 4 is for enabling it to recognize mechanically. Therefore, as long as the latter card number is an approach in which read is possible mechanically, you may make it record it by other approaches, such as a bar code.

[0020] If drawing 2 is referred to, the municipally-operated-race prepaid card system of one example of this invention consists of a center computer 5, and the issuance card information input terminal 7 connected to this center computer 5, the card registration machine 10, an audio response unit 13 and the automatic payment ** machine 15, and has the configuration connected with the usual telephones 12, such as a push-button phone by which the center computer 5 was installed in ordinary homes etc. through the audio response unit 13 and the public network which is not illustrated. Moreover, the center computer 5 is connected with the totalizator system 18 which is a system of sale of a vote ticket, and **** of being main possible [a communication link]. In addition, 9 and 16 are prepaid cards.

[0021] In the case of this example, the center computer 5 has the card information file 6, the issuance function manager 8, the registration control section 11, the vote control section 14, the refund transfer function 17, and the **** control section 19.

[0022] The card information file 6 is a file which manages card information, such as a card number of each published prepaid card, an available balance, a personal identification number, a vote detail, and a vote refund frame, collectively, and shows the example of a content to drawing 3.

[0023] As shown in drawing 3, corresponding to a card number 61, a personal identification number 62, the card amount of money (face value) 63, the balance 64 that can be purchased, the amount 65 of vote ticket purchase, the vote refund frame 66, and the vote detail 67 are registered into the card information file 6. Moreover, 671, the holding location 672 of a municipally operated race, the ball-race number 673, **** 674, the vote number of sheets 675, and **** single gold 676 are registered into each vote detail 67 at the time of an election day.

[0024] Hereafter, actuation of the municipally operated race prepaid card system of this example constituted as mentioned above is explained.

[0025] First, before selling the published prepaid card, a system administrator etc. inputs each card number and face value of a prepaid card which were published by the lot unit from the issuance card information input terminal 7. The card number of this prepaid card of each which was inputted and its face value are transmitted to the center computer 5 from the issuance card information input terminal 7, and are registered into the card information file 6 by the internal issuance function manager 8. That is, while registering each card number as a card number 61 of

drawing 3 ; the face value is registered into the card amount of money 63 and the balance 64 which can be purchased. At this time, 0 is recorded for the value which shows un-registering to a personal identification number 62 on the amount 65 of vote ticket purchase, and the vote refund frame 66, and it changes each vote detail 67 for example, into a null condition. Such registration is ended and a sale is presented with those prepaid cards the back.

[0026] Next, as shown in drawing 2 , the user who purchased the sold prepaid card inserts the prepaid card 9 in the card registration machine 10, and registers the personal identification number for using the prepaid card 9.

[0027] As the card registration machine 10 is shown in drawing 4 , a card slot 101, The card number read station 102 which reads the card number recorded on the recording surface 4 of the prepaid card 9 inserted in this card slot 101, The control units 103, such as a ten key, and the displays 104, such as a CRT display, If it consists of control sections 105 which are connected with the center computer 5 through a communication line, and manage control of the card registration machine 10 whole and the prepaid card 9 which the user purchased is inserted in a card slot 101 The card number recorded on the recording surface 4 of a prepaid card 9 is read by the card number read station 102. A control section 105 displays the prompting message which inputs a personal identification number into a display 104, and if a user operates a control unit 103 and inputs a personal identification number, it will transmit this inputted personal identification number and the card number read by the card number read station 102 to the center computer 5.

[0028] By center computer 5, the information sent from the card registration machine 10 is received by the registration control section 11, and the registration control section 11 starts the processing shown in drawing 5 . First, the received card number is searched from the card information file 6 (S1). And since it is NO) and an inaccurate prepaid card in (S2 when the received card number does not exist in the card information file 6, an error message is returned (S3), and the card registration machine 10 refuses registration of a personal identification number.

[0029] Moreover, when the card number is registered into the card information file 6 (it is YES at S2), it investigates whether corresponding to it, the personal identification number is already registered into the card information file 6, and (S4) and when already being registered, NO) and an error message are returned by (S4 (S3), and, as for the card registration machine 10, registration of a personal identification number is refused. In the case of this example, this is because registration of a personal identification number is merely permitted only at once, and it is prevented that a prepaid card [finishing / personal identification number registration] changes a personal identification number, and is unjustly used by the third party by this.

[0030] On the other hand, when a card number exists and a personal identification number has not been registered (it is YES at S4), corresponding to the card number in which the card information file 6 carried out [above-mentioned] a retrieval success, the personal identification number which received from the card registration machine 10 is registered (S5). That is, the personal identification number which received in the part of the personal identification number 62 corresponding to the card number 61 which corresponded is registered. And a registration result (registered personal identification number) is returned to the card registration machine 10 (S6), and the card registration machine 10 displays this on a display 104, and notifies a user of it.

[0031] Thereby, the user who purchased the prepaid card becomes possible [purchasing a vote ticket based on this prepaid card] .

[0032] In addition, it is because there is a danger that the opportunity of the part for a personal identification number to touch a third party's eyes will increase, and it will invite an unjust act if the configuration of which determines a personal identification number by the system side, and a user is simultaneously notified at the time of a sale of a prepaid card is taken to have made it make the purchaser itself register registration of a personal identification number in this invention using the card registration machine 10. Moreover, the user itself is not made to input a card number, but the card registration machine 10 read it automatically for avoiding the danger that registration of a personal identification number will be unjustly performed to the prepaid

card which has not been purchased, when the user was made to input to a card number.

[0033] Thus, if the card registration machine 10 is installed in the convenience store etc. when selling a prepaid card at a convenience store etc. since actuation of registering a personal identification number to the purchased prepaid card is needed for example, anyone can obtain easily the prepaid card which can be voted and is convenient.

[0034] Now, after registering a personal identification number, the purchase of a vote ticket is attained with the common telephone 12 which can send a push signal. A vote ticket here means the vote ticket on the magnetic-recording medium of the computer used by usual not a vote ticket but telephone vote system etc. of a paper medium. Hereafter, the configuration and its actuation at the time of vote ticket purchase are explained.

[0035] If a user dials telephone 12, a vote reception center is telephoned and the telephone line is connected, telephone 12 and the communication link of the vote control section 14 of the center computer 5 will be attained through an audio response unit 13.

[0036] First, as shown in drawing 6, the vote control section 14 is promoted to a user with voice with an audio response unit 13 so that a card number and a personal identification number may be inputted (S11). If the card number which a user operates push ** of telephone 12 according to this, and is printed on the self prepaid card, and a personal identification number [finishing / registration] are inputted An audio response unit 13 changes into predetermined computer data the card number and personal identification number by the push signal sent out from telephone 12, transmit to the vote control section 14, and the vote control section 14 receives this. It investigates whether the group of the card number, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 (S12).

[0037] the case (it is YES at S13) where the group of the received card number, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 — the registration control section 11 — a cardholder — it attests with his being a principal and future vote ticket purchase actuation is enabled. However, even if the received card number is not registered or it is registered, when a personal identification number does not agree (it is NO at S13), a user is notified of the purport which refuses the purchase of a vote ticket with voice with an audio response unit 13 as that to which the purchase of an inaccurate vote ticket is performed (S14), the telephone line is disconnected, and processing is ended.

[0038] When it attests with his being a just user, the registration control section 11 notifies a user of the balance 64 of drawing 3 registered into the card information file 6 corresponding to the group of the card number and personal identification number which carried out [above-mentioned] agreement which can be purchased with voice through an audio response unit 13 (S15), and performs input process of the vote ticket information on within the limits of the notified balance which can be purchased (S16).

[0039] Namely, if a user inputs vote ticket information, such as a holding location, a ball-race number, **** (victory types, such as quinnella, are included), and the purchase number of votes, for example, by the push button operation from telephone 12 They are changed into predetermined computer data by the audio response unit 13, and are transmitted to the vote control section 14 by it. The vote control section 14 investigates whether these purchase prices fall within the range of the user's balance which can be purchased, and when not settled, it processes that an audio response unit 13 notifies that with voice etc.

[0040] on the other hand, when the vote ticket information that it falls within the range of the balance which can be purchased is inputted The propriety of purchase is judged based on the ball-race progress information sent from the totalizator system 18 (S17). When it can purchase, deliver YES) and vote ticket information to a totalizator system 18, and it is made to total by (S18 (S19). Moreover, while recording this vote ticket information on the vote detail 67 corresponding to the card number 61 concerned in the card information file 6, the purchase amount of money is added to the amount 65 of vote ticket purchase, and the purchase amount of money is reduced from the balance 64 which can be purchased (S20). And a user is notified of a vote result with voice through an audio response unit 13 (S21).

[0041] Then, the vote control section 14 repeats the processing returned and mentioned above to YES) and processing S15 by (S22, when it asks a user with voice whether continue vote or not through an audio response unit 13, for example, continuation of vote is directed by actuation of push **, and if the directions which finish vote are inputted, the telephone line will be cut and it will end processing.

[0042] Next, the reception of a transfer of a refund and the user of a refund is explained.

[0043] A totalizer system 18 transmits the hit refund information containing a holding location, a ball-race number, **** that guessed right, and **** single gold to the center computer 5 after ** ball-race termination.

[0044] This hit refund information is received by the refund transfer function 17 of the center computer 5. The refund transfer function 17 About the vote detail containing the holding location and ball-race number which the hit refund information concerned shows among the vote details 67 registered into the card information file 6 The amount of money which registered the **** single gold which hit refund information shows to the **** single gold 676 when having guessed right, and multiplied the vote number of sheets 675 by **** single gold 676 is added to the vote refund frame 66. In addition, although it is unnecessary, you may make it especially processing register into **** single gold 676 the value of the purport which has not guessed right, for example, when having not guessed right.

[0045] Now, when getting to know that vote of the self [user / who cast his vote] in a newspaper, radio, etc. guessed right and receiving a refund, it goes to the location in which the prepaid card used for vote was brought and the automatic payment ** machine 15 was installed, and as shown in drawing 2 , the prepaid card 16 is inserted in the automatic payment ** machine 15, and a refund is received.

[0046] As the automatic payment ** machine 15 is shown in drawing 7 , a card slot 151, The card number read station 152 which reads the card number recorded on the recording surface 4 of the prepaid card 16 inserted in this card slot 151, The control units 153, such as a ten key, and the displays 154, such as a CRT display, The cash-disbursement opening 155 and the money processing section 156 which discharges cash from this cash-disbursement opening 155, If it consists of control sections 157 which are connected with the center computer 5 through a communication line, and manage control of the automatic payment ** machine 15 whole and a user inserts the self prepaid card 16 in a card slot 151 The card number recorded on the recording surface 4 of a prepaid card 16 is read by the card number read station 152.

[0047] A control section 157 displays the prompting message which inputs a personal identification number into a display 154, and if a user operates a control unit 153 and inputs a personal identification number, it will transmit this inputted personal identification number and the card number read by the card number read station 152 to the center computer 5.

[0048] By center computer 5, the information sent from the automatic payment ** machine 15 is received by the **** control section 19, and the **** control section 19 starts the processing shown in drawing 8 . First, it investigates whether the group of the card number sent from the automatic payment ** machine 15, the card number corresponding to a personal identification number, and a personal identification number is registered into the card information file 6 (S31). And since it is NO) and an inaccurate prepaid card in (S32 when the agreeing group does not exist in the card information file 6, an error message is returned (S33), and the automatic payment ** machine 15 refuses a repayment.

[0049] Moreover, when the group of the agreeing card number and personal identification number is registered into the card information file 6 (it is YES at S32), It investigates whether the vote refund frame 66 registered corresponding to it is 0 (S34), when a vote refund frame is 0, NO) and an error message are returned by (S34 (S33), and the automatic payment ** machine 15 displays on a display 154 that there is no refund, and refuses a repayment.

[0050] On the other hand, the group of the agreeing card number and personal identification number exists, and when the vote refund frame 66 is not 0 (it is YES at S34), the **** control section 19 notifies the vote refund frame 66 to the automatic payment ** machine 15 (S35).

[0051] Pointing to the control section 157 of the automatic payment ** machine 15 so that the cash which is equivalent to the vote refund frame to the money processing section 156 may be

paid, if advice of a vote refund frame is received from the **** control section 19, the money processing section 156 pays the cash of the directed frame to a user with the cash-disbursement opening 155. In addition, after that, the automatic payment ** machine 15 notifies the purport which the payment of cash completed to the **** control section 19 of the center computer 5, and the **** control section 19 initializes the vote refund frame 66 of the card information file 6 to 0.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the top view of the prepaid card used with the municipally operated race prepaid card system of one example of this invention.

[Drawing 2] It is the block diagram showing the example of a configuration of the municipally operated race prepaid card system of one example of this invention.

[Drawing 3] It is drawing showing the example of a content of a card information file.

[Drawing 4] It is the block diagram showing the example of a configuration of a card registration machine.

[Drawing 5] It is the flow chart which shows an example of processing of a registration control section.

[Drawing 6] It is the flow chart which shows an example of processing of a vote control section.

[Drawing 7] It is the block diagram showing the example of a configuration of an automatic payment ** machine.

[Drawing 8] It is the flow chart which shows an example of processing of a **** control section.

[Description of Notations]

1, 9, 16 — Prepaid card

2 — Face value

3 — Card number

4 — Recording surface which carried out magnetic recording of the card number

5 — Center computer

6 — Card information file

7 — Issuance card information input terminal

8 — Issuance function manager

10 — Card registration machine

11 — Registration control section

12 — Telephone

13 — Audio response unit

14 — Vote control section

15 — Automatic payment ** machine

17 — Refund transfer function

18 — Totalizator system

19 — Payment *****

[Translation done.]

(11)特許出願公開番号

(43)公開日 平成7年(1995)6月23日

技術表示箇所

A

(74) 代理人 弁理士 境 廣巳

—807—

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【特許請求の範囲】

【請求項1】 センタに設置され、発行された個々のプリペイドカードのカード番号および使用可能金額を登録してあるカード情報ファイルと、

プリペイドカード購入者によるプリペイドカードに対する暗証番号登録操作にตอบสนองして、入力された暗証番号とそのプリペイドカードに記録されているカード番号とをセンタに送出するカード登録機と、

センタに設置され、前記カード登録機から送出されてきたカード番号に対応してその暗証番号を前記カード情報ファイルに登録する登録制御手段と、

センタに設置されると共に公衆網に接続された電話機と音声応答装置を介して接続され、接続先の電話機のプッシュ操作によって入力されたカード番号に対応して前記カード情報ファイルに登録されている暗証番号と前記接続先の電話機のプッシュ操作によって入力された暗証番号とを照合して本人の認証を行った後、前記入力されたカード番号に対応して前記カード情報ファイルに登録されている利用可能金額の範囲内で投票の受付処理を行い、受け付けた投票にかかる購入代金を前記カード情報ファイルに登録された利用可能金額から減算する投票制御手段とを具備したことを特徴とする公営競技プリペイドカードシステム。

【請求項2】 前記投票制御手段は、受け付けた投票の明細を前記プリペイドカードのカード番号に対応して前記カード情報ファイルに登録すると共にトータリゼータシステムに送信する構成を備え、且つ、

センタに設置され、前記トータリゼータシステムからの的中払戻金情報に基づいて前記カード情報ファイル内の的中した投票の明細に的中金を繰り入れる払戻金繰入手段と、

払戻要求者から入力された暗証番号と挿入されたプリペイドカードに記録されたカード番号とをセンタに送出し、センタから通知された払戻金額の現金を払戻要求者に払い戻す自動払戻機と、

センタに設置され、前記自動払戻機から送出されたカード番号に対応して前記カード情報ファイルに登録されている暗証番号と前記自動払戻機から送出された暗証番号とを照合して本人の認証を行った後、前記入力されたカード番号に対応して前記カード情報ファイルに登録されている的中金の総額を払戻金額として前記自動払戻機に通知する払戻制御手段とを備えることを特徴とする請求項1記載の公営競技プリペイドカードシステム。

【請求項3】 個々のプリペイドカードにはカード番号が印刷されていると共に磁気記録によって記録されており、前記カード登録機および前記自動払戻機はプリペイドカードに磁気記録されているカード番号を読取ることを特徴とする請求項2記載の公営競技プリペイドカードシステム。

【請求項4】 前記カード情報ファイルには、プリペイ

ドカードのカード番号対応に、暗証番号、カード金額、購入可能残高、投票券購入額、投票払戻金額および受け付けた個々の投票の明細が記録され、各投票の明細として、投票日時、競技開催場所、レース番号、組番、投票枚数および払戻単金が記録されることを特徴とする請求項3記載の公営競技プリペイドカードシステム。

【発明の詳細な説明】

【0001】

【産業上の利用分野】 本発明は公営競技プリペイドカードシステムに関し、より詳細には、プリペイドカードを使用して競艇などの公営競技に対する投票を一般の電話機から行うことができる公営競技プリペイドカードシステムに関する。

【0002】

【従来の技術】 従来、競艇や競馬等の公営競技の投票券は、公営競技場または場外発売場に出向き、窓口で自分の購入したい投票券を宣言し、現金と引き換えて券発機より出力される投票券を入手する方法が一般的であり、地理的制約を受けるために投票券の購入機会を著しく限定することとなっていた。

【0003】 また、電話投票や在宅端末投票に代表される会員制の銀行口座引落を決済手段とする投票券購入システムも存在するが、これは、先ず銀行引落を条件とする会員組織に加入し、銀行に公営競技施行者との質橋設定をされた定期担保口座を開設することにより、銀行口座を購入払戻の決済手段とする投票が可能になるものであり、定期担保口座を開設するための資金や手間が必要であったり、その会員になるために或る程度の事務手続き期間が必要になるという問題点があった。

【0004】 そこで、より手軽に投票券が購入できるようにするために、プリペイドカードを使用した以下のような投票券購入システムが提案されている。

【0005】 その1つは、例えば特開平2-262755号公報に見られるように、書き換え不能にしたカード番号と書き換え可能にした金額とを記録したプリペイドカードと、プリペイドカードに記録されたカード番号の読取りや金額の書き換え等の機能を有する特別な通信用端末機とを使用し、この通信用端末機を一般の電話回線を通じてセンタと接続して両者間の通信により投票券の購入を行い、通信用端末側では購入額に見合う金額をプリペイドカード中の金額から減ずると共に、センタ側では投票明細をカード番号に対応して保存しておき、後にプリペイドカードを使用した払戻要求があった場合、そのプリペイドカードのカード番号に対応してセンタに保存された投票明細に従って的中金を払い戻すようにしたシステム（以下、第1の従来システムと称す）である。

【0006】 もう1つは、例えば特開平4-370879号公報に見られるように、書き換え可能にした金額を記録したプリペイドカードと、プリペイドカードに記録された金額の書き換えやそのプリペイドカードに対する

固有番号の記録等の機能を有する特別なカード端末装置とを使用し、このカード端末装置を一般の電話回線を通じてセンタと接続して投票内容と暗証番号とをセンタに伝え、センタ側では、通知された投票内容と暗証番号とに固有番号を付加して保存すると共にその固有番号をカード端末装置側に返却し、カード端末装置側では、返却された固有番号をプリペイドカードに記録すると共にプリペイドカードに記録された金額を利用額分だけ減じ、更に、カード端末装置にプリペイドカードをセットした上で暗証番号を入力して投票結果の参照が要求された場合には、その暗証番号とカード端末装置で読み取られたプリペイドカードの固有番号とに基づいてセンタ側において投票内容を特定し、その投票結果を返却するようにしたシステム（以下、第2の従来システムと称す）である。

【0007】

【発明が解決しようとする課題】 上述した従来のプリペイドカードを使用した投票券購入システムでは、プリペイドカードを購入すれば、後は一般の電話回線を使用してセンタと通信することにより投票券を購入することができるので、地理的な制約が解消すると共に手続きも簡単になり、既存の投票券購入システムに比べると手軽に投票券を購入することができる。しかしながら、以下のような問題点がある。

【0008】投票券購入時、第1の従来システムでは、通信用端末がプリペイドカードに記録されたカード番号を読み取ると共に購入額分だけプリペイドカードに記録された金額を減額するようにしており、第2の従来システムでは、カード端末装置がセンタで付与された固有番号をプリペイドカードに記録すると共に購入額分だけプリペイドカードに記録された金額を減額するようにしているため、それぞれ通信用端末、カード端末装置という特別な装置が必要となり、一般に普及しているプッシュフォン等の通常の電話機だけでは投票券を購入することができない。

【0009】また、第1および第2の従来システムとも、プリペイドカードの残高をそのプリペイドカード自体に記録して管理しているため、残高の改ざんによってプリペイドカードが不正に利用される危険性が高い。

【0010】更に、投票券購入時、第1の従来システムでは、プリペイドカードに記録されたカード番号だけで本人を確認し、第2の従来システムでは暗証番号は入力するがこれは後の投票結果照会時の本人認証のために利用するだけで、投票券購入に際しては本人の認証は行わないため、不注意によりプリペイドカードが第三者の手に渡った場合に悪用される危険性が高い。

【0011】そこで本発明の目的は、プッシュフォン等の通常の電話機を使用してプリペイドカードによる投票券の購入を可能にした公営競技プリペイドカードシステムを提供することにある。

【0012】また本発明の別の目的は、プリペイドカードの残高の改ざんを有効に防止することができる公営競技プリペイドカードシステムを提供することにある。

【0013】更に本発明の他の目的は、プリペイドカードの第三者による悪用を有効に防止することができる公営競技プリペイドカードシステムを提供することにある。

【0014】

【課題を解決するための手段】 本発明の公営競技プリペイドカードシステムは上記の目的を達成する為に、センタに設置され、発行された個々のプリペイドカードのカード番号および使用可能金額を登録してあるカード情報ファイルと、プリペイドカード購入者によるプリペイドカードに対する暗証番号登録操作にตอบสนองして、入力された暗証番号とそのプリペイドカードに記録されているカード番号とをセンタに送出するカード登録機と、センタに設置され、前記カード登録機から送出されてきたカード番号に対応してその暗証番号を前記カード情報ファイルに登録する登録制御手段と、センタに設置されると共に公衆網に接続された電話機と音声応答装置を介して接続され、接続先の電話機のプッシュ釦操作によって入力されたカード番号に対応して前記カード情報ファイルに登録されている暗証番号と前記接続先の電話機のプッシュ釦操作によって入力された暗証番号とを照合して本人の認証を行った後、前記入力されたカード番号に対応して前記カード情報ファイルに登録されている利用可能金額の範囲内で投票の受付処理を行い、受け付けた投票にかかる購入代金を前記カード情報ファイルに登録された利用可能金額から減算する投票制御手段とを備えている。

【0015】

【作用】 本発明の公営競技プリペイドカードシステムにおいては、個々のプリペイドカードには、ユニークなカード番号が利用者によって確認できるようにカード面に印刷されていると共に磁気記録等の方法でも記録されており、利用可能金額はカード自体に磁気記録等の方法で記録されておらず、センタで一括管理される。即ち、発行された個々のプリペイドカードのカード番号および使用可能金額は、その販売に先立って、センタに設置されたカード情報ファイルに登録される。

【0016】プリペイドカードを購入した利用者は、投票券を購入する前に暗証番号を登録する必要があり、購入したプリペイドカードをカード登録機に挿入して暗証番号の入力を伴う暗証番号登録操作を行うと、カード登録機が、入力された暗証番号とそのプリペイドカードに磁気記録等の方法で記録されているカード番号とをセンタに送出し、センタに設置された登録制御手段が、カード登録機から送出されてきたカード番号に対応してその暗証番号をカード情報ファイルに登録する。

【0017】暗証番号の登録を終えた利用者は、以後、

この暗証番号を使用して当該プリペイドカードによる投票券の購入が可能となる。即ち、利用者が、ブッシュフォン等の通常の電話機からセンタを呼び出すと、センタに設置された投票制御手段が音声応答装置を介して電話機と接続され、利用者が電話機のブッシュフォン操作によって自己のプリペイドカードのカード番号と上記登録した暗証番号とを入力すると、投票制御手段が、入力されたカード番号に対応してカード情報ファイルに登録されている暗証番号と電話機から入力された暗証番号とを照合して本人の認証を行った後、前記入力されたカード番号

【0018】

【実施例】次に本発明の実施例について図面を参照して詳細に説明する。

【0019】図1を参照すると、本発明の一実施例の公営競技プリペイドカードシステムで使用されるプリペイドカード1は、カードの表面に券面額2とシステムで一意となるカード番号3とが印刷されている。また、磁気記録媒体で構成された記録面4が設けられており、この記録面4に、印刷されたカード番号3と同一のカード番号が磁気的に記録されている。印刷されたカード番号3は利用者が自身のプリペイドカードのカード番号を認識し得るようにするためのものであり、記録面4に記録されているカード番号は機械的に認識し得るようにするためのものである。従って、後者のカード番号は機械的に読取り可能な方法であれば、バーコード等の他の方法で記録するようにしても良い。

【0020】図2を参照すると、本発明の一実施例の公営競技プリペイドカードシステムは、センタコンピュータ5と、このセンタコンピュータ5に接続された発行カード情報入力端末7、カード登録機10、音声応答装置13、自動払戻機15とから構成されており、音声応答装置13および図示しない公衆網を介してセンタコンピュータ5が一般家庭等に設置されたブッシュフォン等の通常の電話機12と接続される構成を有している。また、センタコンピュータ5は、投票券の発売、払戻のおもとのシステムであるトータルゼータシステム18と通信可能に接続されている。なお、9、16はプリペイドカードである。

【0021】センタコンピュータ5は、本実施例の場合、カード情報ファイル6と、発行管理機能8と、登録制御部11と、投票制御部14と、払戻金繰入機能17と、払戻制御部19とを有している。

【0022】カード情報ファイル6は、発行された個々のプリペイドカードのカード番号、利用可能残高、暗証番号、投票明細、投票払戻金額等といったカード情報を一括して管理するファイルであり、その内容例を図3に

示す。

【0023】図3に示すように、カード情報ファイル6には、カード番号61に対応して、暗証番号62、カード金額(券面額)63、購入可能残高64、投票券購入額65、投票払戻金額66および投票明細67が登録される。また、各投票明細67には、投票日時671、公営競技の開催場所672、レース番号673、組番674、投票枚数675および払戻単金676が登録される。

【0024】以下、上述のように構成された本実施例の公営競技プリペイドカードシステムの動作を説明する。

【0025】まず、発行されたプリペイドカードを販売する前に、システム管理者等は、発行カード情報入力端末7から、発行された個々のプリペイドカードのカード番号と券面額とを例えばロット単位で入力する。この入力された個々のプリペイドカードのカード番号およびその券面額は発行カード情報入力端末7からセンタコンピュータ5に伝達され、内部の発行管理機能8により、カード情報ファイル6に登録される。即ち、個々のカード番号を図3のカード番号61として登録すると共にその券面額をカード金額63および購入可能残高64に登録する。このとき、暗証番号62には未登録を示す値が、投票券購入額65および投票払戻金額66には0が記録され、各投票明細67は例えば空白状態にされる。このような登録を終了して後、それらのプリペイドカードは販売に供される。

【0026】次に、販売されたプリペイドカードを購入した利用者は、図2に示すように、そのプリペイドカード9をカード登録機10に挿入して、そのプリペイドカード9を使用するための暗証番号の登録を行う。

【0027】カード登録機10は、例えば図4に示すように、カード挿入口101と、このカード挿入口101に挿入されたプリペイドカード9の記録面4に記録されたカード番号を読み取るカード番号読取部102と、テンキー等の操作部103と、CRTディスプレイ等の表示部104と、通信回線を通じてセンタコンピュータ5と接続されカード登録機10全体の制御を司る制御部105とで構成されており、利用者が購入したプリペイドカード9をカード挿入口101に挿入すると、プリペイドカード9の記録面4に記録されたカード番号がカード番号読取部102で読み取られる。制御部105は、表示部104に暗証番号を入力する促進メッセージを表示し、利用者が操作部103を操作して暗証番号を入力すると、この入力された暗証番号とカード番号読取部102で読み取られたカード番号とを、センタコンピュータ5に送信する。

【0028】センタコンピュータ5では、カード登録機10から送られてきた情報は登録制御部11で受信され、登録制御部11は例えば図5に示す処理を開始する。まず、受信したカード番号をカード情報ファイル6

から検索する(S1)。そして、受信したカード番号がカード情報ファイル6に存在しないときは(S2でNO)、不正なプリペイドカードなのでエラーメッセージを返却し(S3)、カード登録機10は暗証番号の登録を拒否する。

【0029】また、カード番号がカード情報ファイル6に登録されていた場合(S2でYES)、それに対応して暗証番号が既にカード情報ファイル6に登録されているか否かを調べ(S4)、既に登録されていたときは(S4でNO)、エラーメッセージを返却し(S3)、カード登録機10は暗証番号の登録を拒否する。これは、本実施例の場合、暗証番号の登録はただ一度だけ許可しているためであり、これにより、暗証番号登録済のプリペイドカードが第三者によって暗証番号を変更して不正に使用されることが防止される。

【0030】他方、カード番号が存在し且つ暗証番号が未登録の場合(S4でYES)、カード情報ファイル6の上記検索成功したカード番号に対応して、カード登録機10から受信した暗証番号を登録する(S5)。即ち、図3の一致したカード番号61に対応する暗証番号62の箇所に受信した暗証番号を登録する。そして、登録結果(登録した暗証番号)をカード登録機10に返却し(S6)、カード登録機10はこれを表示部104に表示して利用者に通知する。

【0031】これにより、プリペイドカードを購入した利用者は、このプリペイドカードに基づいて投票券を購入することが可能となる。

【0032】なお、本発明において、カード登録機10を使用して暗証番号の登録を購入者自身に登録させるようにしたのは、若し、暗証番号をシステム側で決めてプリペイドカードの販売時に同時に利用者に通知する構成をとると、その分だけ暗証番号が第三者の目に触れる機会が多くなり、不正な行為を招来する危険性があるためである。また、カード番号を利用者自身に入力させずカード登録機10が自動的に読み取るようにしたのは、カード番号まで利用者に入力させると、購入していないプリペイドカードに対して不正に暗証番号の登録が行われてしまう危険性を回避するためである。

【0033】このように、購入したプリペイドカードに対して暗証番号を登録する操作が必要となるため、例えばプリペイドカードをコンビニエンスストア等で販売する場合、そのコンビニエンスストア等にカード登録機10を設置しておけば、誰でも手軽に投票可能なプリペイドカードを入手することができ、便利である。

【0034】さて、暗証番号の登録を行った後は、プッシュ信号が発信できる一般の電話機12により、投票券の購入が可能となる。ここでいう投票券とは通常の紙媒体の投票券ではなく、電話投票システムなどで用いるコンピュータの磁気記録媒体上の投票券をいう。以下、投票券購入時の構成およびその動作を説明する。

【0035】利用者が電話機12をダイヤルして投票受付センタへ電話し、電話回線がつながると、センタコンピュータ5の投票制御部14が音声応答装置13を介して電話機12と通信可能になる。

【0036】投票制御部14は、先ず、図6に示すように、カード番号と暗証番号とを入力するよう音声応答装置13により音声にて利用者に促進する(S11)。これに応じて利用者が電話機12のプッシュ鈕を操作して自己のプリペイドカード上に印刷されているカード番号と登録済の暗証番号とを入力すると、音声応答装置13は電話機12から送出されたプッシュ信号によるカード番号と暗証番号とを所定のコンピュータデータに変換して投票制御部14に伝達し、投票制御部14はこれを受信して、そのカード番号、暗証番号に合致するカード番号、暗証番号の組がカード情報ファイル6に登録されているか否かを調べる(S12)。

【0037】受信したカード番号、暗証番号に合致するカード番号、暗証番号の組がカード情報ファイル6に登録されていた場合(S13でYES)、登録制御部11はカード所有者本人であると認証し、以後の投票券購入操作を可能とする。しかし、受信したカード番号が登録されていないか、登録されていても暗証番号が合致しない場合(S13でNO)、不正な投票券の購入が行われているものとして、音声応答装置13により音声にて投票券の購入を拒否する旨を利用者に通知し(S14)、電話回線を切断して処理を終了する。

【0038】正当な利用者であると認証した場合、登録制御部11は、上記合致したカード番号と暗証番号との組に対応してカード情報ファイル6に登録されている図3の購入可能残高64を音声応答装置13を通じて音声にて利用者に通知し(S15)、その通知した購入可能残高の範囲内での投票券情報の入力処理を行う(S16)。

【0039】即ち、利用者が電話機12から開催場所、レース番号、組番(連勝式等の勝ち式を含む)、購入票数等の投票券情報を例えばプッシュ鈕操作によって入力すると、それらが音声応答装置13によって所定のコンピュータデータに変換されて投票制御部14に伝達され、投票制御部14はこれらの購入代金とその利用者の購入可能残高の範囲内に収まるか否かを調べ、収まらない場合にはその旨を音声応答装置13にて音声にて通知する等の処理を行う。

【0040】他方、購入可能残高の範囲内に収まる投票券情報を入力した場合には、トータリゼータシステム18から送られてきているレース進行情報をもとに購入の可否を判断し(S17)、購入可能な場合は(S18でYES)、投票券情報をトータリゼータシステム18へ受け渡して集計させ(S19)、またカード情報ファイル6における当該カード番号61に対応する投票明細67に今回の投票券情報を記録すると共に、購入金額を投

票券購入額65に加算し、また購入可能残高64から購入金額を減額する(S20)。そして、音声応答装置13を通じて投票結果を音声にて利用者に通知する(S21)。

【0041】その後、投票制御部14は、投票を続けるか否かを音声応答装置13を通じて音声にて利用者に問い合わせる例えばプッシュ釦の操作によって投票の継続が指示された場合には(S22でYES)、処理S15に戻って上述した処理を繰り返し、投票を終える指示が入力されると、電話回線を切断して処理を終了する。

【0042】次に、払戻金の繰り入れと払戻金の利用者の受け取りについて説明する。

【0043】トータルータシステム18は、毎レース終了後、開催場所、レース番号、的中した組番および払戻単金を含む的中払戻金情報をセンタコンピュータ5に送信する。

【0044】この的中払戻金情報はセンタコンピュータ5の払戻金繰入機能17で受け取られ、払戻金繰入機能17は、カード情報ファイル6に登録されている投票明細67のうち、当該的中払戻金情報の示す開催場所およびレース番号を含む投票明細について、的中している場合にはその払戻単金676に的中払戻金情報の示す払戻単金を登録し、且つ、投票枚数675に払戻単金676を乗じた金額を投票払戻金額66に加算する。なお、的中していない場合は特に処理は必要ないが、例えば的中していない旨の値を払戻単金676に登録するようにしても良い。

【0045】さて、投票した利用者が新聞やラジオ等で自己の投票が的中したことを知り、払戻金を受け取る場合、投票に使用したプリペイドカードを持参して自動払戻機15の設置された場所に出向き、図2に示すようにそのプリペイドカード16を自動払戻機15に挿入して払戻金を受け取る。

【0046】自動払戻機15は、例えば図7に示すように、カード挿入口151と、このカード挿入口151に挿入されたプリペイドカード16の記録面4に登録されたカード番号を読み取るカード番号読取部152と、テンキー等の操作部153と、CRTディスプレイ等の表示部154と、現金支払口155と、この現金支払口155から現金を排出する金銭処理部156と、通信回線を通じてセンタコンピュータ5と接続され自動払戻機15全体の制御を司る制御部157とで構成されており、利用者が自己のプリペイドカード16をカード挿入口151に挿入すると、プリペイドカード16の記録面4に登録されたカード番号がカード番号読取部152で読み取られる。

【0047】制御部157は、表示部154に暗証番号を入力する促進メッセージを表示し、利用者が操作部153を操作して暗証番号を入力すると、この入力された暗証番号とカード番号読取部152で読み取られたカー

ド番号とをセンタコンピュータ5に送信する。

【0048】センタコンピュータ5では、自動払戻機15から送られてきた情報は払戻制御部19で受信され、払戻制御部19は例えば図8に示す処理を開始する。まず、自動払戻機15から送られてきたカード番号、暗証番号に合致するカード番号、暗証番号の組がカード情報ファイル6に登録されているか否かを調べる(S31)。そして、合致する組がカード情報ファイル6に存在しないときは(S32でNO)、不正なプリペイドカードなのでエラーメッセージを返却し(S33)、自動払戻機15は払い戻しを拒否する。

【0049】また、合致するカード番号と暗証番号との組がカード情報ファイル6に登録されていた場合(S32でYES)、それに対応して登録されている投票払戻金額66が0でないか否かを調べ(S34)、投票払戻金額が0のときは(S34でNO)、エラーメッセージを返却し(S33)、自動払戻機15は払戻金がないことを表示部154に表示して払い戻しを拒否する。

【0050】他方、合致するカード番号と暗証番号との組が存在し且つ投票払戻金額66が0でない場合(S34でYES)、払戻制御部19は、その投票払戻金額66を自動払戻機15に通知する(S35)。

【0051】自動払戻機15の制御部157は、払戻制御部19から投票払戻金額の通知を受けると、金銭処理部156に対してその投票払戻金額に相当する現金を支払うよう指示し、金銭処理部156は指示された額の現金を現金支払口155にて利用者に支払う。なお、その後、自動払戻機15はセンタコンピュータ5の払戻制御部19に対して現金の支払いが完了した旨を通知し、払戻制御部19はカード情報ファイル6の投票払戻金額66を0に初期化する。

【0052】

【発明の効果】以上説明した本発明の公営競技プリペイドカードシステムによれば、以下のような効果を得ることができる。

【0053】投票券の購入時、プリペイドカードの正規購入者であることを確認するために必要となるプリペイドカードのカード番号および暗証番号をプッシュ釦操作によって入力し、且つ、プリペイドカードの残高をカード自体で管理しない構成を採用したので、通常の電話機にて投票券の購入が可能となり、どこでも手軽に電話による投票券の購入が行える。

【0054】プリペイドカードの残高はセンタのカード情報ファイルによって管理されているため、利用者によってプリペイドカードの残高が故意に改ざんされる可能性は皆無となる。

【0055】登録した暗証番号と一致しなければ投票券の購入が行えず、その暗証番号は本人しか知らずカード自体には記載されていないので、たとえカード番号の印刷されたプリペイドカードが不注意により第三者の手に

渡ったとしても、不正に使用されることがない。また、的中金の払戻時にも暗証番号にて本人の確認をとるようにしたので、払戻における第三者の不正も有効に防止できる。

【図面の簡単な説明】

【図1】本発明の一実施例の公営競技プリペイドカードシステムで使用されるプリペイドカードの平面図である。

【図2】本発明の一実施例の公営競技プリペイドカードシステムの構成例を示すブロック図である。

【図3】カード情報ファイルの内容例を示す図である。

【図4】カード登録機の構成例を示すブロック図である。

【図5】登録制御部の処理の一例を示すフローチャートである。

【図6】投票制御部の処理の一例を示すフローチャートである。

【図7】自動払戻機の構成例を示すブロック図である。

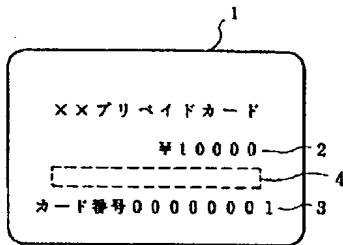
【図8】払戻制御部の処理の一例を示すフローチャート

である。

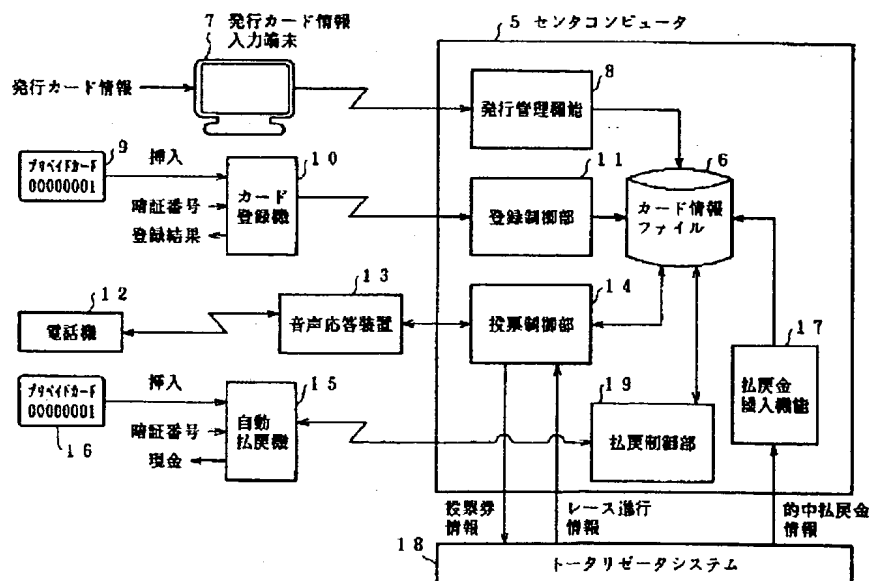
【符号の説明】

- 1, 9, 16…プリペイドカード
- 2…券面額
- 3…カード番号
- 4…カード番号を磁気記録した記録面
- 5…センタコンピュータ
- 6…カード情報ファイル
- 7…発行カード情報入力端末
- 8…発行管理機能
- 10…カード登録機
- 11…登録制御部
- 12…電話機
- 13…音声応答装置
- 14…投票制御部
- 15…自動払戻機
- 17…払戻金繰入機能
- 18…トータリゼータシステム
- 19…払戻制御部

【図1】



【図2】

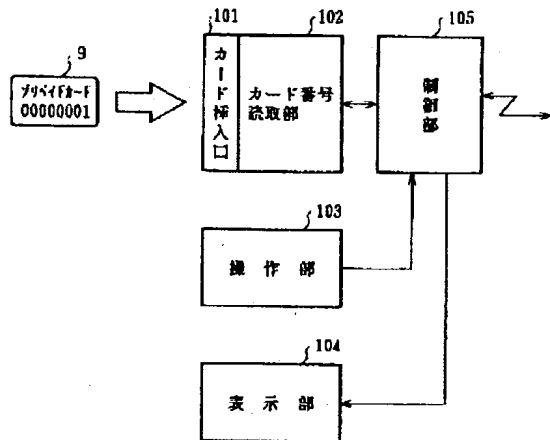


【図3】

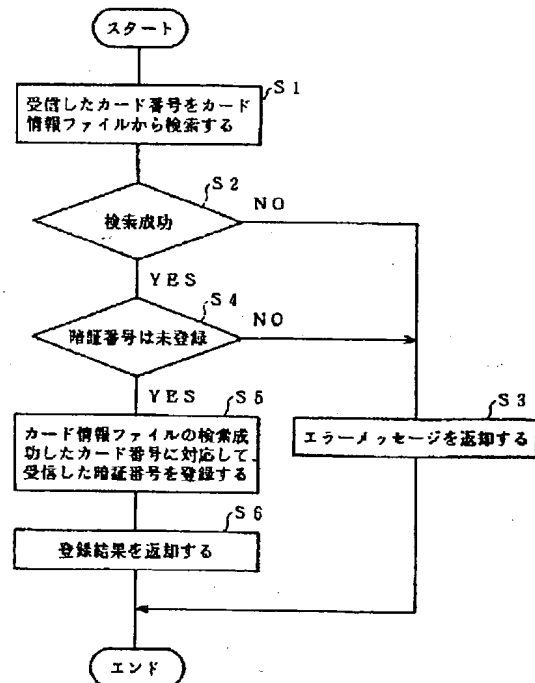
61 カード番号	62 暗証 番号	63 カード 金額	64 購入可 能残高	65 投票券 購入額	66 投票払 戻金額	67 投票 明細 1	投票 明細 2	投票 明細 n
12345678	1234	10000	9000	1000	5000			
12345679	4321	5000	3000	2000	0			

671 投票日時	672 競馬場	673 レース No.	674 組番	675 枚数	676 払戻 単金
1993年08月06日10時15分	平和島	10	1-2	10	500

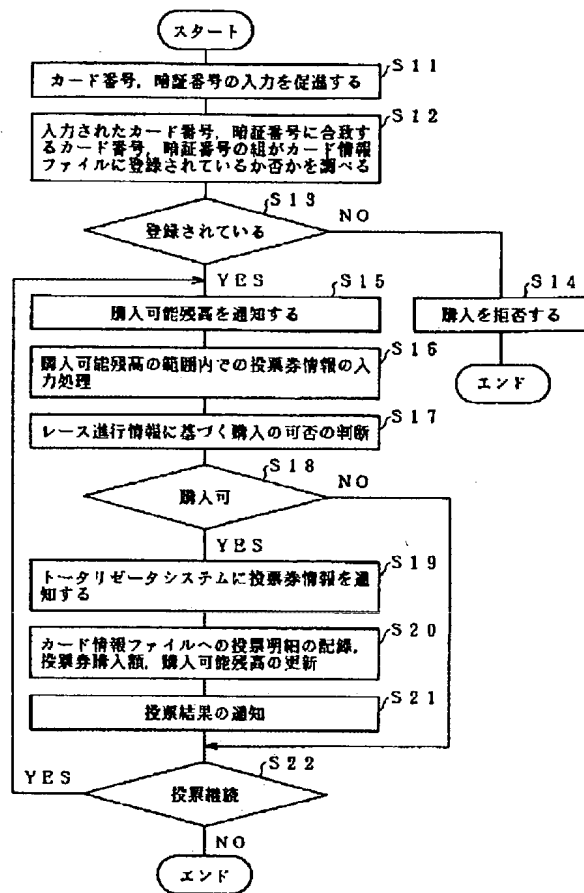
【図4】



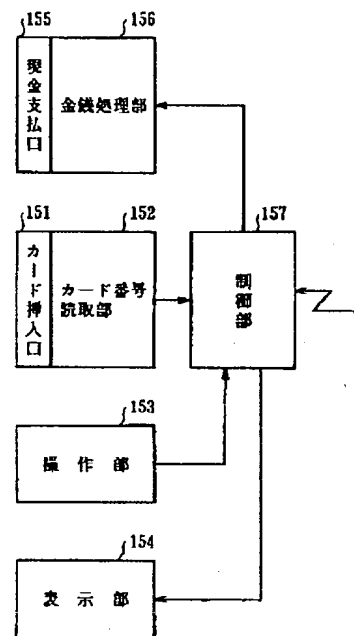
【図5】



【図6】



【図7】



【図8】

